



WCN1320 DC544D Family Modular Installation Guide

80-VT856-1 Rev. A

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Revision history

Revision	Date	Description
A	September 2009	Initial release

1 Introduction

1.1 Purpose

The purpose of this document is to provide OEMs and ODMs with installation information pertaining to the DC544D (65-VN780-xx) family of WCN1320-based PCIe daughter cards. Disseminating end user documentation for the installation or removal of the DC544D family of adapters is expressly prohibited by regulatory statutes.

1.2 Scope

This document is intended as guide for OEM and ODM personnel responsible for the installation of DC544D adapters into an appropriate housing.

1.3 Conventions

Function declarations, function names, type declarations, and code samples appear in a different font, e.g., `#include`.

Code variables appear in angle brackets, e.g., `<number>`.

Commands and command variables appear in a different font, e.g., **copy a:*. * b:**.

Parameter types are indicated by arrows:

- Designates an input parameter
- ← Designates an output parameter
- ↔ Designates a parameter used for both input and output

Shading indicates content that has been added or changed in this revision of the document.

1.4 References

Reference documents, which may include QUALCOMM[®], standards, and resource documents, are listed in [Table 1-1](#). Reference documents that are no longer applicable are deleted from this table; therefore, reference numbers may not be sequential.

Table 1-1 Reference documents and standards

Ref.	Document	
Qualcomm		
Q1	<i>Application Note: Software Glossary for Customers</i>	CL93-V3077-1
Q2	<i>Application Note: WCN1320 DC544D Reference Design Family</i>	80-VT797-1

1.5 Technical assistance

For assistance or clarification on information in this guide, submit a case to Qualcomm CDMA Technologies at <https://support.cdmatech.com/>.

If you do not have access to the CDMA Tech Support Service website, register for access or send email to support.cdmatech@qualcomm.com.

1.6 Acronyms

For definitions of terms and abbreviations, refer to [Q1].

2 Modular Installation

This section provides typical modular installation instructions for the DC544D family of PCIe daughter cards, product labeling, and product usage information.

2.1 Typical modular installation

[Figure 2-1](#) shows prototype housing for the DC544D family of PCIe daughter cards. Remove the four (4) screws from the top (2 screws) and left side (2 screws) of the housing.

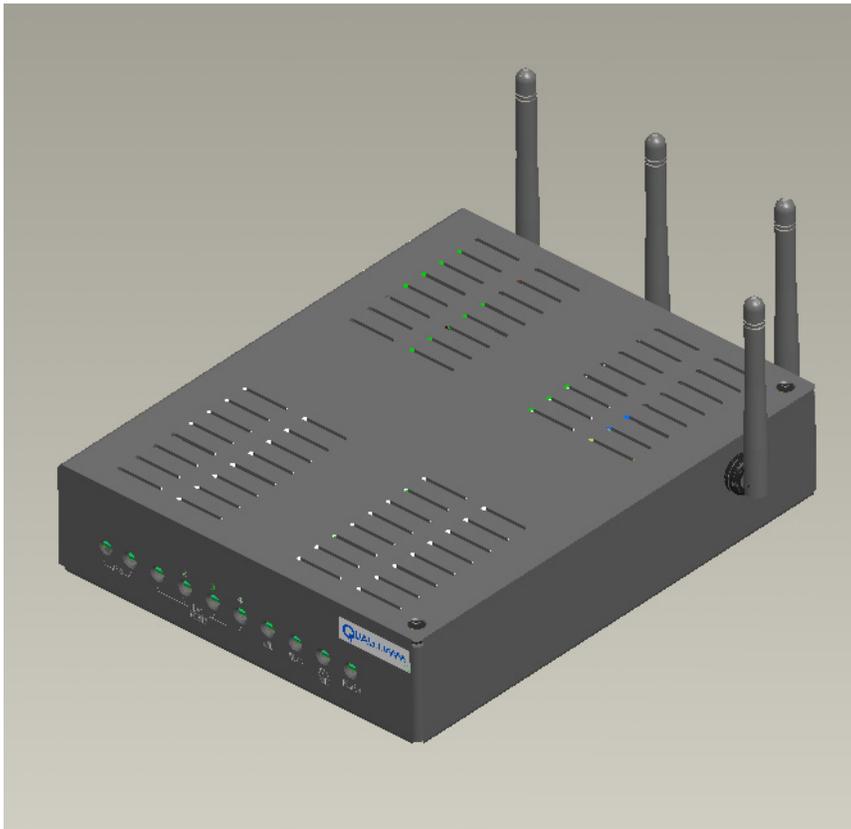


Figure 2-1 Prototype housing with internal DC544D daughter card

The installation of the DC544D within the housing is shown in [Figure 2-2](#). Position the adapter so that the PCIe connector is facing the front of the housing and the metal shield on the DC544D is facing the top of the housing. The adapter must be inserted into the PCIe slot of the AP board and fastened to the housing between the top (metal brackets) and bottom (plate) supports with four (4) screws. Tighten the screws through the holes provided in the top bracket, the DC544D, aligning

the holes of the bracket and DC544D with the screw receptacles in the bottom mounting bracket affixed on the top of the AP board.

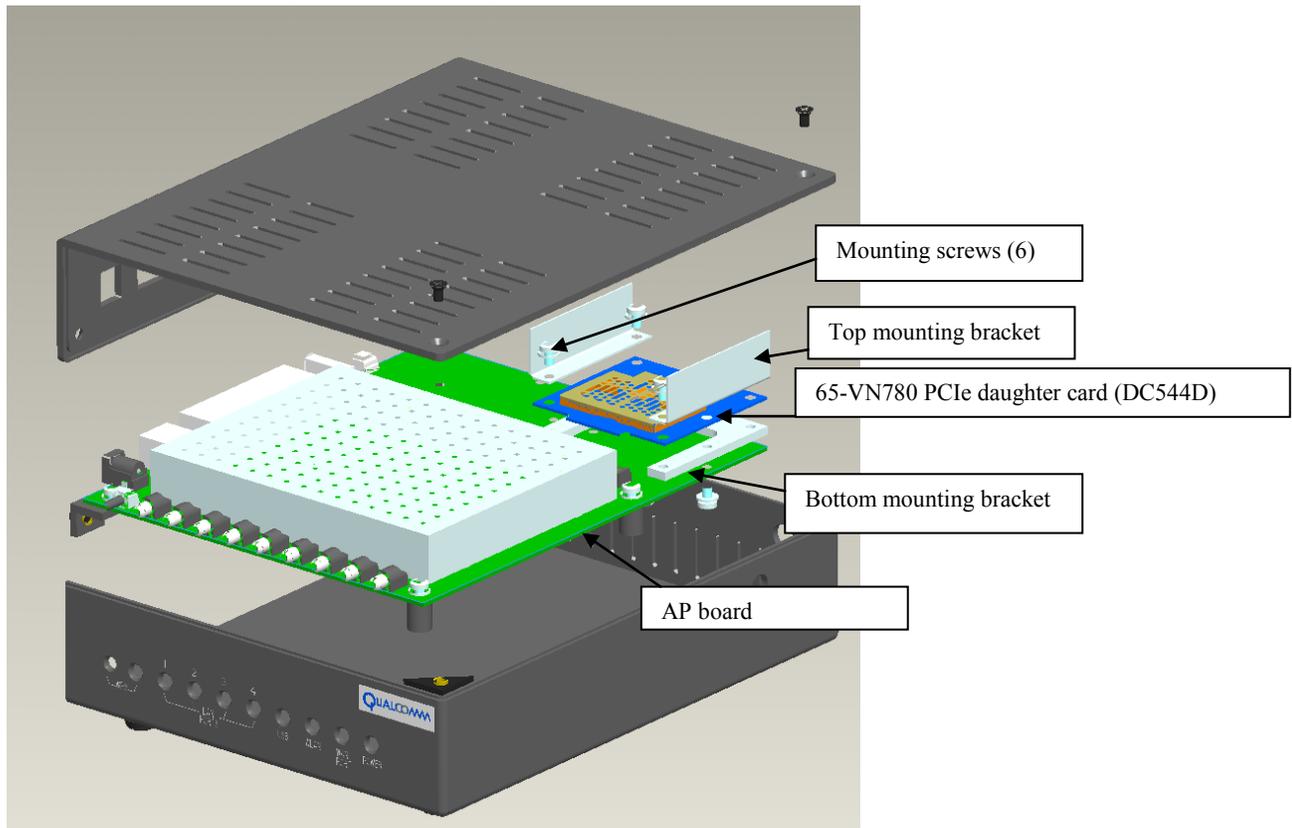


Figure 2-2 Modular installation

NOTE: The 65-VN780 (DC544D) provides support for four (4) antennas per radio module. These antennas are connected by way of Hirose (U-FL or IPAX) connectors. There are no special requirements for the types of antennas used with 802.11n technology. The specifications for the antennas that have been used with the DC544D are as follows:

- Frequency range: 2.4 ~ 2.5 GHz; 4.9 ~ 5.825 GHz
- Impedance: 50 ohms nominal
- VSWR: 1.92 : 1 maximum
- Normal gain: 2 dBi @ 2.4 ~ 2.5 GHz
- Normal gain: 3 dBi @ 4.9 ~ 5.825 GHz
- Radiation: omni-directional
- Polarization: linear; vertical

2.2 Product labeling

The DC544D radio transmitter module is authorized only for use in a device where the antenna may be installed so that 20 cm can be maintained between the antenna and the users. End user products containing DC544D modules **MUST** have affixed to their labels the following phrase:

This product contains FCC ID: J9C-DC544D1 or J9C-DC544D2 or J9C-DC544D3 module

2.3 Product usage

This device is intended only for OEM/ODM integrators under the following conditions:

1. The antenna must be installed so that 20 cm is maintained between the antenna and users.
2. The transmitter module may not be co-located with any other transmitter or antenna.

Use only authorized antenna(s) as described in the FCC filing under FCCID: J9C-DC544D1 or J9C-DC544D2 or J9C-DC544D3.

The OEM/ODM integrator is responsible for testing their product for any additional compliance mandates required when this module is installed within an end user product.

i IMPORTANT NOTE: In the event that these conditions cannot be met, then the FCC authorization is no longer considered valid and the FCC ID number cannot be used on the final product and thus the OEM/ODM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

2.4 Product documentation

The following RF exposure information shall be supplied in the end user manual for products containing the DC544D PCIe daughter cards:

i IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.